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U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE

ALASKA FOREST RESEARCH CENTER

Forest Insect Surveys

Quarterly Progress Report
April - June 1960

During this quarterly period the regular field season activities started and there were a number of visitors.

Black-headed Budworm and Hemlock Sawfly Sampling

Overwintering egg populations of both the black-headed budworm and the hemlock sawfly were sampled from May 2nd to 20th. Thirty-five scattered locations were sampled, all within the southern half of Southeast Alaska.

The sample from each location consisted of five ten-inch branches from each of three different trees or a total of fifteen ten-inch branches per location. Branch samples were taken from open growing reproduction size hemlock trees primarily within old clear cut areas.

None of the locations sampled supported high egg populations of the black-headed budworm. Although eggs were found at all sampling locations, the highest counts were only .11 egg per twig inch. This indicates that light, or at most, moderate defoliation can be expected this year. Since this is the first sampling of the current outbreak, it remains to be seen if the population is rising or falling. Some egg parasitism was recorded but only a few samples exceeded ten percent parasitism and none exceeded twenty percent.

Hemlock sawfly eggs were included in the count for all samples. The occurrence of sawfly eggs was sporadic and the number fluctuated widely. Most of the samples did not contain sawfly eggs. However, in the nine samples where they did occur, four contained 70 or more eggs each.

Larval Sampling Program

The regular larval sampling program got underway on June 16 with Rose and Tierney in the field and Werner handling the rearing in the laboratory. Almost all effort this year will be spent in Southeast Alaska with perhaps one short trip through portions of Interior Alaska. The research boat MV Maybeso is being used as transportation and housing for the field crew.

Visit to Canadian Control Project

The following group visited the Canadian black-headed budworm spray project at Alliford Bay in the Queen Charlotte Islands from June 18 thru 20: Loyal Bouchard, U. S. Fish and Wildlife Service, Juneau; William Meehan, Alaska State Department of Fish and Game, Juneau; John Whiteside, U. S. Forest Service, Washington, D. C.; Benton Howard, U. S. Forest Service, Portland; and George Downing, U. S. Forest Service, Juneau.

Particularly useful and informative discussions were held with Hector Richmond, Project Operational Director; Jim Kinghorn, Project Technical Director; and Ian McLean and Ian Todd, Project Fisheries Consulants.

These discussions pointed out one thing above all others, the need for more research on the black-headed budworm. There are many gaps in our knowledge of this insect and also its associates, such as the hemlock sawfly. One particularly vexing problem is the lack of information regarding budworm development by elevation and aspect. This type of information is needed for control project planning.

Although spraying had not started, the project was ready to go and afforded a good look at the overal operational setup.

Visitors

May - June — Benton Howard, from the Division of Forest Pest Control, Forest Service, Region 6, Portland, on detail to Region 10 to develop an operational control plan for the Region. Downing spent considerable time with Howard discussing control problems in Alaska and on aerial get-acquainted-flights over Southeast Alaska.

June 1-20 — W. V. Benedict and J. M. Whiteside, Division of Forest Pest Control, Forest Service, Washington, D. C. They visited areas in both Interior and Southeast Alaska becoming acquainted with insect conditions and potential pest control problems.

June 14-17 — G. M. Jemison, Deputy Assistant Chief of Research, Forest Service, Washington, D. C. A discussion of the research program at the Research Center, visits to field stations, and a general look at the forests of Alaska.

Publications

McCambridge, W. F. and Downing, G. L.
Black-headed Budworm. USDA Forest Pest Leaflet No. 45. March 1960

Meetings

June 2 — A joint meeting of U. S. Forest Service and U. S. Fish and Wildlife Service personnel to discuss the potential use of insecticides for controlling outbreaks of the black-headed budworm in Southeast Alaska.

June 3 — A joint meeting of U. S. Forest Service and Alaska State Department of Fish and Game personnel to discuss the potential use of insecticides for controlling outbreaks of the black-headed budworm in Southeast Alaska.

Personnel Changes

R. L. Tierney, an undergraduate at Iowa State University, was hired as a summer field assistant on June 1.

W. E. Rose, a graduate student from the University of Massachusetts, was transferred from Region 6 on June 6. Bill is a permanent employee, having completed the Forest Service Trainee Program.

R. A. Werner, a graduate student at Pennsylvania State University, was hired as a summer laboratory assistant on June 7.

Juneau, Alaska
August 23, 1960

G. L. Downing
Entomologist